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PRO

LAND APPLICATION OF BIOSOLIDS
DAVID CARLTON

KQ14 (FIELDS 1 – 5)
KING & QUEEN COUNTY, VIRGINIA
JUNE 2012



June 29, 2012

Mr. Scott Healey
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

Dear Mr. Healey,

Transmitted herein for your consideration is land application site for David Carlton,. (designated as KQ 14, fields 1-5), located in King & Queen County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Sylva".

Chris Sylva
Technical Services Manager



FIELD SUMMARY SHEET

David Carlton

KQ14

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
14-01	57.2	57.2	1293		Millers Tavern	Helen Longest
14-02	124.5	124.3	1226		Millers Tavern	Helen Longest
14-03	54.1	53.4	1093		Millers Tavern	Helen Longest
14-04	166.4	163.2	2114		Millers Tavern	Helen Longest
14-05	22.8	20.1	2113/2114		Millers Tavern	Helen Longest
TOTALS:	425.0	418.2				

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D : MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 6/25/12 between Helen Longest referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Helen Longest, located in K+Q, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one: ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No	X Yes <input type="checkbox"/> No

Helen A Longest PO Box 69
HELEN H LONGEST 5 STEPHENS CH.
VA 23148

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Chris Sylva</u>	<u>Chris Sylva</u>	10647 Tidewater Trail
Permittee- Authorized Representative	Signature	Mailing Address
Printed Name		Champlain, VA 22438

**VIRGINIA POLLUTION ABATEMENT APPLICATION
PART D-VI LAND APPLICATION AGREEMENT**

Page 2 of 2

Permittee: Synagro Central, LLC

Permit # or County: _____

Landowner: _____

Farm Name or Address: _____

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Allen A. Longest
Landowner's Signature

Rev 10/03/2011

06/25/12
Date

Tax ID Landowner Identification Sheet

<u>Landowner</u>	<u>Field #</u>	<u>Tax ID</u>
Helen Longest	14-01	
Helen Longest	14-02	
Helen Longest	14-03	
Helen Longest	14-04	
Helen Longest	14-05	

<u>Field #</u>	<u>Latitude (north)</u>	<u>Longitude (west)</u>
14-01	37 ⁰ 48' 45.87"	76 ⁰ 59' 24.40"
14-02	37 ⁰ 48' 58.77"	76 ⁰ 59' 58.09"
14-03	37 ⁰ 48' 13.54"	76 ⁰ 59' 50.24"
14-04	37 ⁰ 47' 54.57"	76 ⁰ 59' 55.24"
14-05	37 ⁰ 47' 39.19"	77 ⁰ 00' 05.17"

Farm Summary Report

Plan: New Plan Fall, 2008 - Fall, 2009

Farm Name: New Farm

Location: King & Queen

Specialist: Kelly Love

N-based Acres: 418.2

P-based Acres: 0.0

Tract Name: 1093

FSA Number: 0

Location: King & Queen

Field Name: 14-3

Total Acres: 54.10 Usable Acres: 53.40

FSA Number: 0

Tract: 1093

Location: King & Queen

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE PH P

[NO TEST]

K

Lab

Soils:

PERCENT SYMBOL SOIL SERIES

30 14B Rumford

20 4B Emporia

10 4C Emporia

30	5D	Emporia Slagle
10	5E	Emporia Slagle

Field Warnings:
Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with perent slope in excess of 15%

Tract Name: 1226
FSA Number: 0
Location: King & Queen

Field Name: 14-2
Total Acres: 124.50 Usable Acres: 124.30
FSA Number: 0
Tract: 1226
Location: King & Queen
Slope Class: B
Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:
DATE PH P K Lab
[NO TEST]

Soils:

PERCENT	SYMBOL	SOIL SERIES
15	4B	Emporia
15	5D	Emporia Slagle
40	17A	Suffolk

10	14C	Rumford
20	14B	Rumford

Field Warnings:
Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with perent slope in excess of 15%

Tract Name: 1293
FSA Number: 0
Location: King & Queen

Field Name: 14-1
Total Acres: 57.20 Usable Acres: 57.20
FSA Number: 0
Tract: 1293
Location: King & Queen
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:	PH	K	Lab
DATE	P		
[NO TEST]			

Soils:

PERCENT	SYMBOL	SOIL SERIES
20	14B	Rumford
15	14C	Rumford
60	17A	Suffolk

5 5E Emporia Slagle

Field Warnings:
Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with parent slope in excess of 15%

Tract Name: 2113&2114
FSA Number: 0
Location: King & Queen

Field Name: 14-5
Total Acres: 22.80 Usable Acres: 20.10
FSA Number: 0
Tract: 2113&2114
Location: King & Queen
Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:
DATE PH P K Lab
[NO TEST]

Soils:
PERCENT 50
SYMBOL 5D SOIL SERIES Emporia Slagle

10	17B	Suffolk
30	14B	Rumford
10	W	Water

Field Warnings:
Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with high potential for subsurface lateral flow based on soil texture and poor drainage

Soils with percent slope in excess of 15%

Tract Name: 2114	
FSA Number:	0
Location:	King & Queen
Field Name: 14-4	
Total Acres:	166.40 Usable Acres: 163.20
FSA Number:	0
Tract:	2114
Location:	King & Queen
Slope Class:	C
Hydrologic Group:	B

Riparian buffer width: 0 ft
Distance to stream: 100 ft

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:			
DATE	PH	P	Lab
[NO TEST]			

Soils:	PERCENT	SYMBOL	SOIL SERIES
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5	5E	Emporia Slagle
10	5D	Emporia Slagle
10	4B	Emporia
30	17B	Suffolk
20	15B	Slagle
15	14B	Rumford
10	14C	Rumford

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

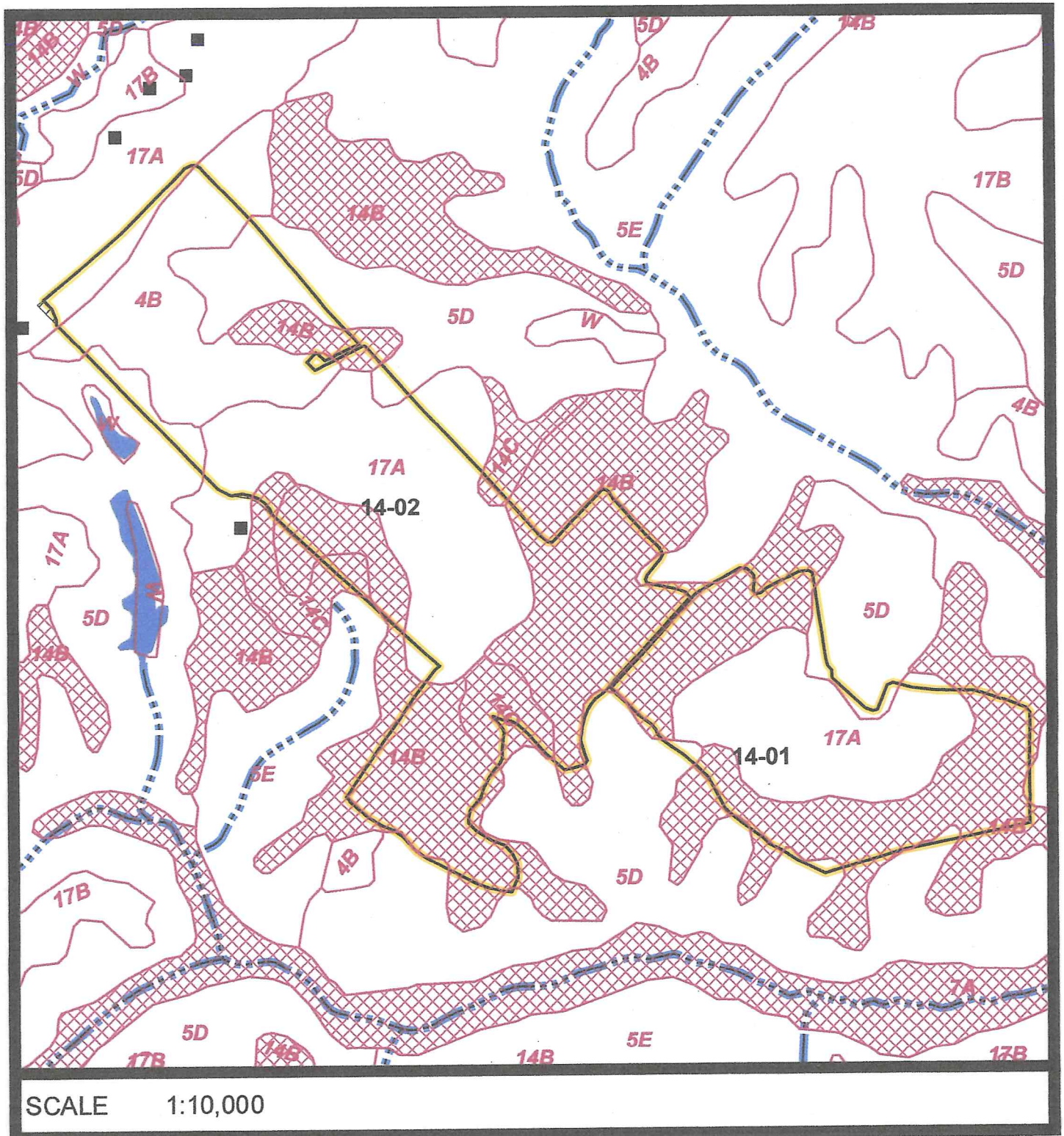
Soils with parent slope in excess of 15%

Environmentally Sensitive Areas

Field	Reason for Sensitive Area
14-01	High Leaching Potential (Map Unit 14B – 52%)
14-02	High Leaching Potential (Map Units 14B, 14C – 43%)
14-03	High Leaching Potential (Map Unit 14B – 49%)
14-04	High Leaching Potential (Map Unit 14B – 9%)
14-05	High Leaching Potential (Map Unit 14B – 26%)

King & Queen County Soils that are Environmentally Sensitive

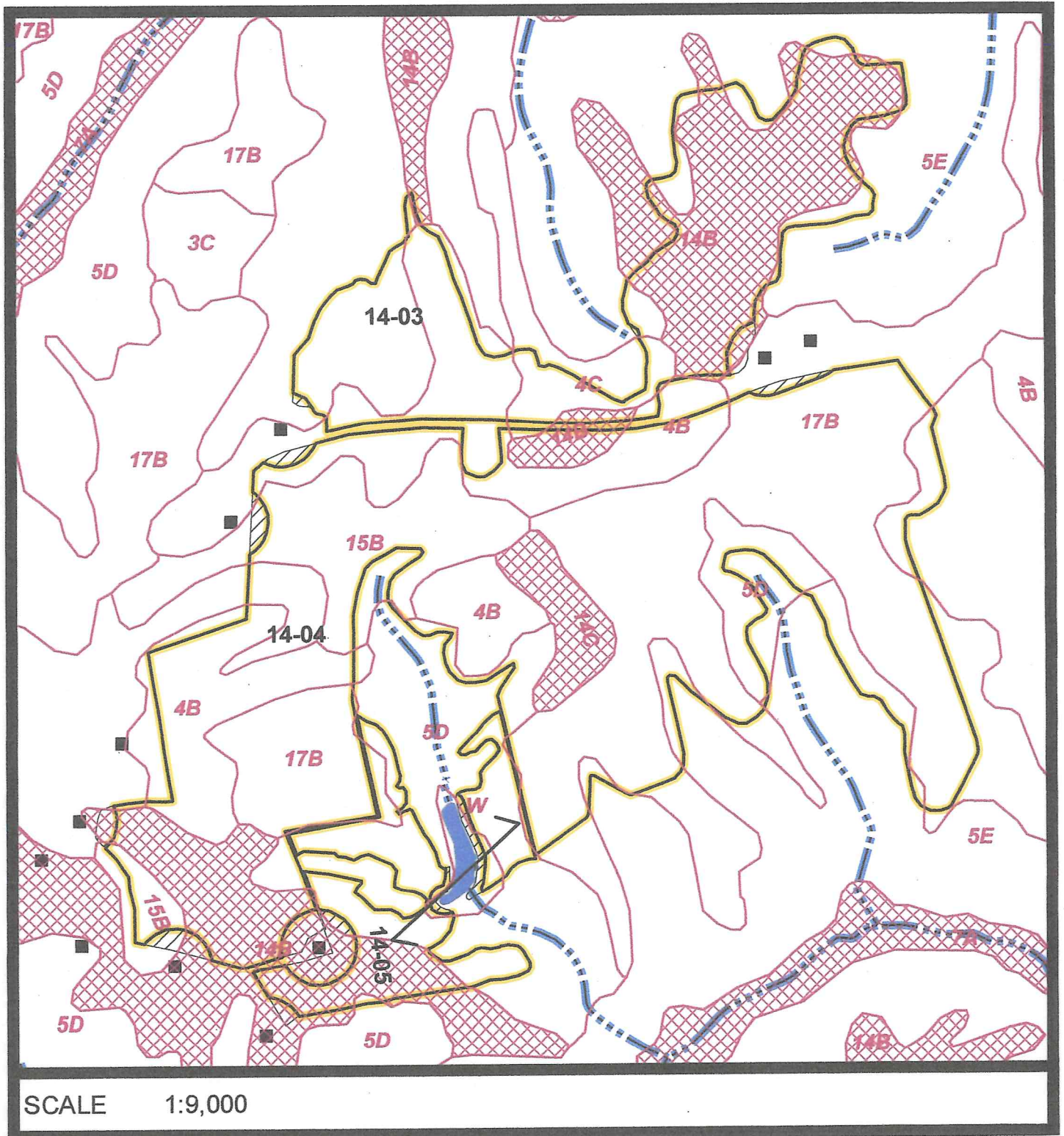
Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
1A	Augusta	Dec – May		
2A, 2B	Bojac			Leaching
7A	Kinston	Nov – June	Nov – June	
8A	Levy	Jan – Dec	Jan – Dec	Drainage
12A	Rappahannock	Jan – Dec	Jan – Dec	Drainage
13A	Roanoke	Nov – May		
14B, 14C	Rumford			Leaching
18B	Tarboro			Leaching
20A	Tomotley	Nov – April		
21A	Wahee	Dec – March		




SOIL MAP

 Environmentally Sensitive Areas

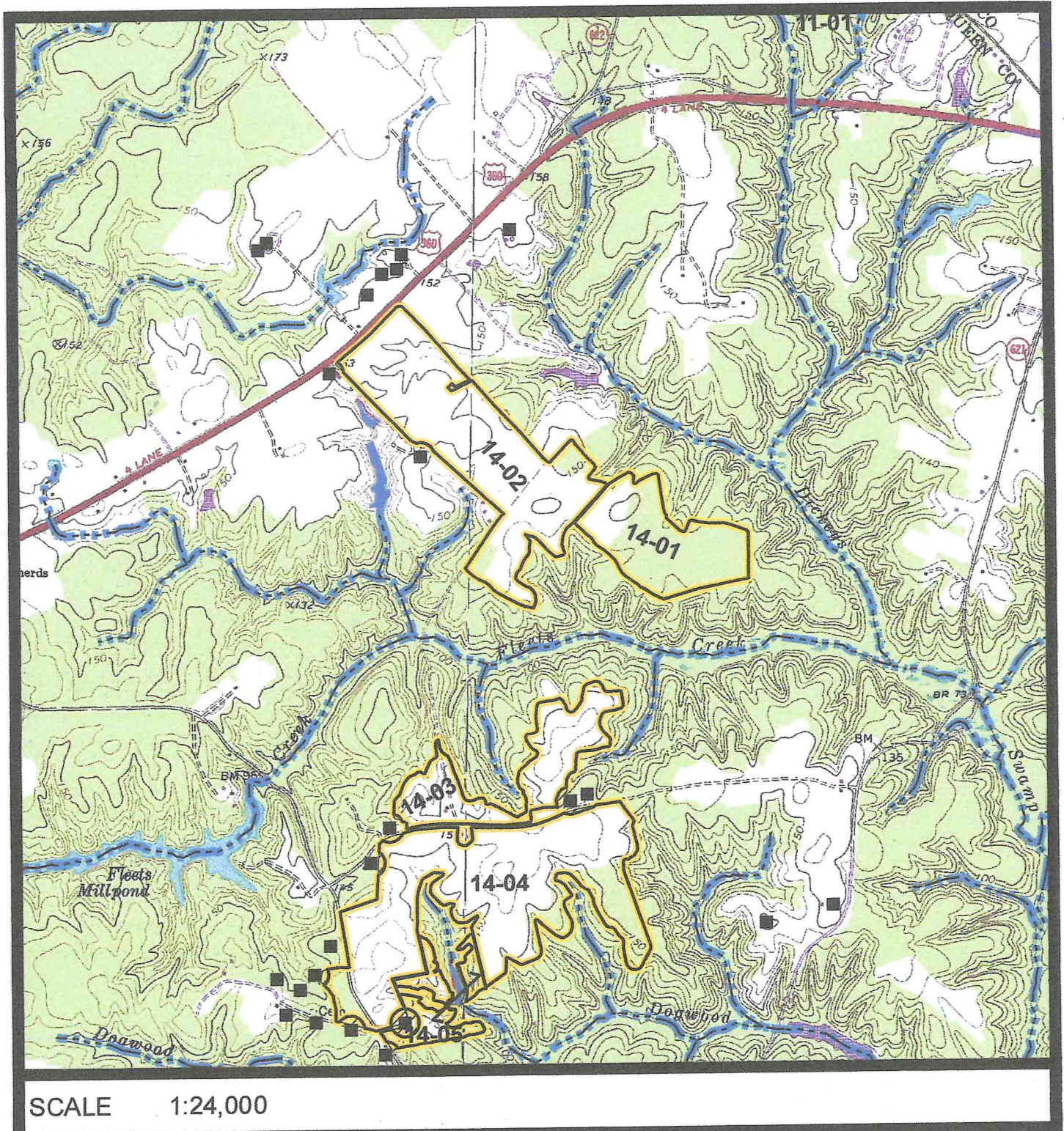




SOIL MAP

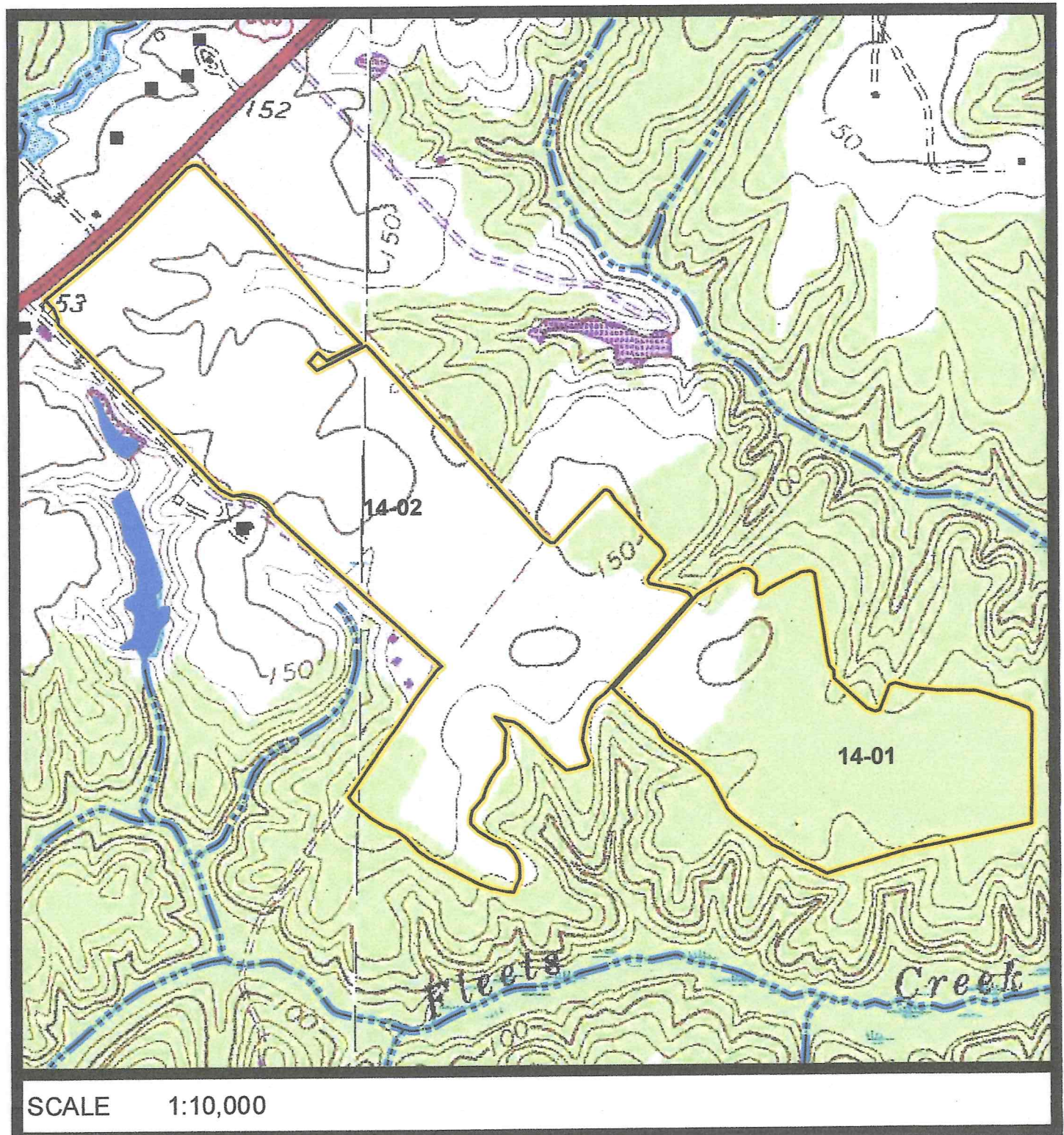
 Environmentally Sensitive Areas





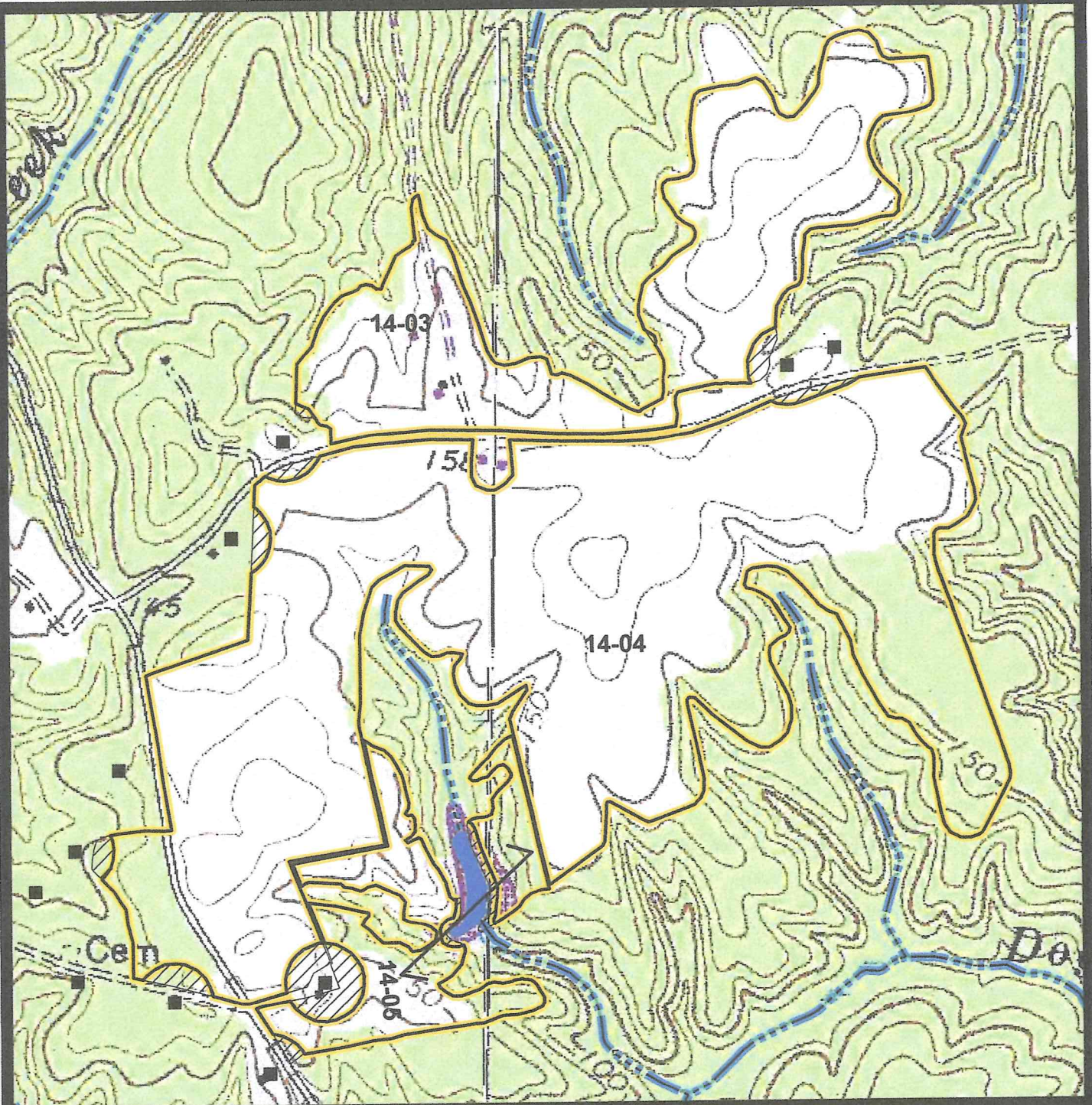
TOPO MAP





TOPO MAP

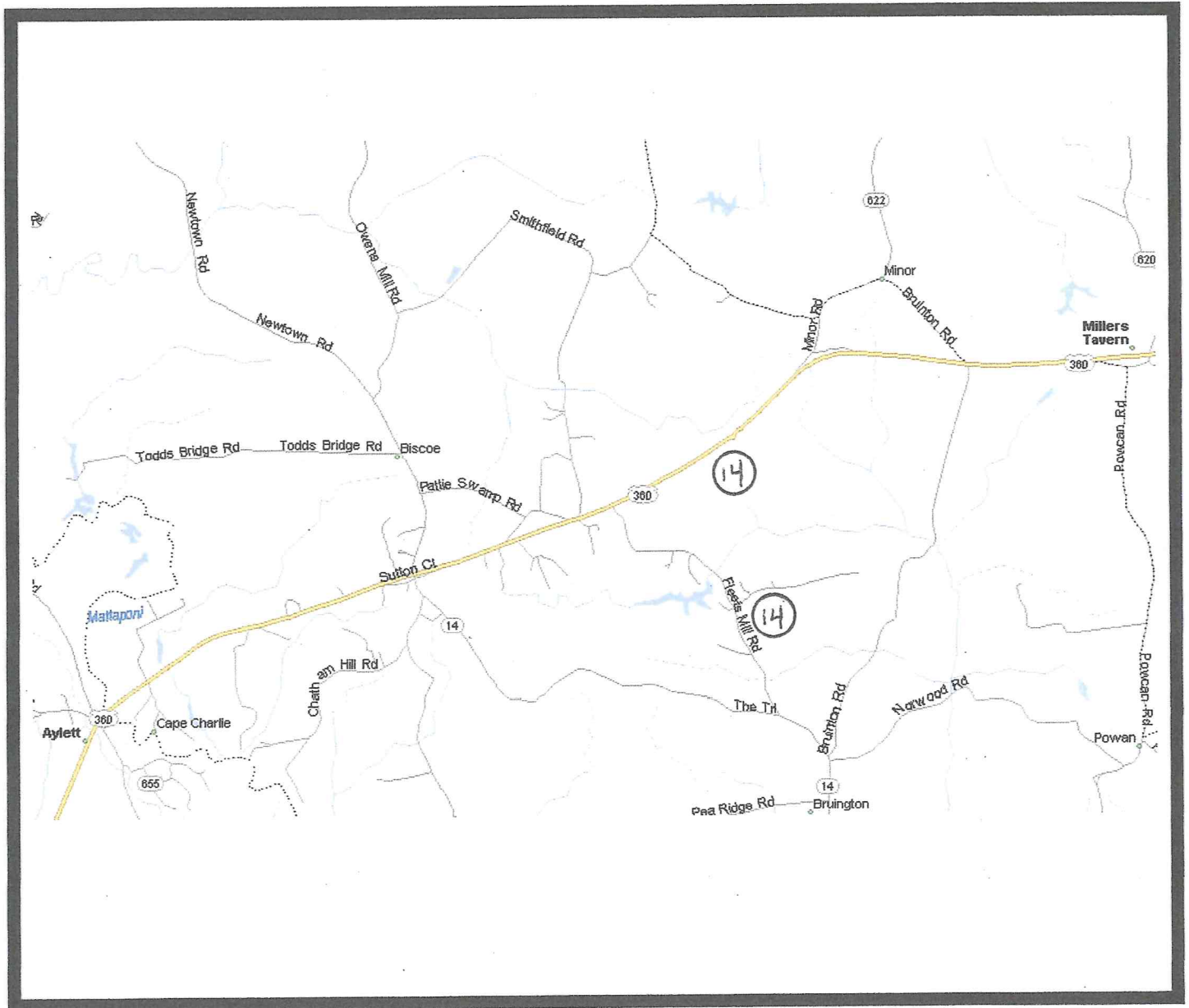




SCALE 1:9,000

TOPO MAP





LOCATION MAP

